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The effect of labor absorption, government expenditure, and life expectancy on poverty with economic growth as a mediation variable in Aceh Province

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Abstract--This study aims to analyze the influence of labor absorption, government expenditure, and life expectancy on poverty with economic growth as a mediating variable in Aceh Province. Panel data regression method is used. The findings in model I show that labor absorption has no effect on poverty, while government expenditure has a positive effect on poverty and life expectancy has a negative effect on poverty. Model II shows that labor absorption has a negative effect on economic growth, and government expenditure has a positive effect on economic growth while life expectancy has a positive effect on economic growth. Model III explains that economic growth has a negative effect on poverty. Model IV results in labor absorption and government expenditure have no effect on poverty, while life expectancy has a negative effect on poverty and economic growth has a positive effect on poverty. The results of the mediation effect explain that economic growth mediation has no effect on labor absorption on poverty, and government expenditure on poverty through economic growth as a mediator has a negative result, and life

expectancy on poverty through economic growth as a mediator has a negative effect. Through the results of this study, it is hoped that the Aceh Government in providing poverty alleviation policies needs to be directed at synergy between increasing economic growth and improving socio-economic indicators in order to achieve community welfare.

Keywords---poverty, government expenditure, economic growth, labor absorption, life expectancy.

Introduction

Poverty is a complex issue and is influenced by several factors, such as capital expenditure, employment opportunities, and economic growth (Faharuddin & Endrawati (2022). In Indonesia, the problem of poverty is a challenge, although the poor population has decreased in the last six years. According to data from the Central Statistics Agency (hereinafter abbreviated as BPS), in 2024, poverty in Indonesia was 8.57%. This decline in poverty reflects the success of several government programs. However, the reality on the ground is that the number of poor people is still very large due to inflation, health crises, pandemics, and so on. Therefore, overcoming poverty is a priority for equitable welfare and social justice. Poverty eradication also has an effect on education (Bertoni et al., 2025). Almost every province throughout Indonesia still has people experiencing poverty, such as Aceh Province.

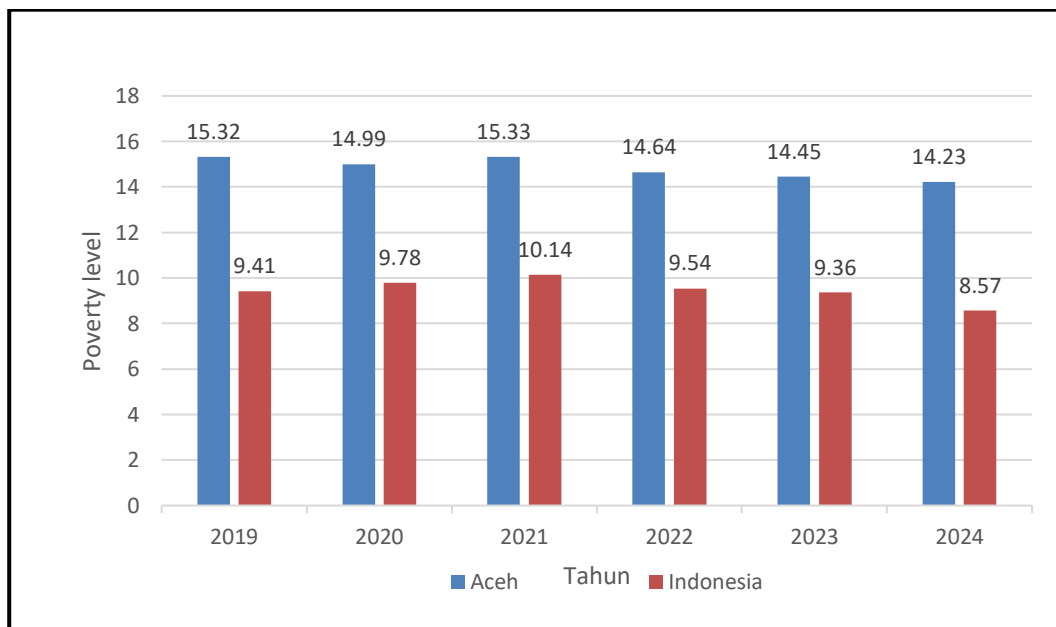


Figure 1. Poverty Rate in Aceh Province and Indonesia 2019-2024 (percent)
Source: Central Statistics Agency (2024)

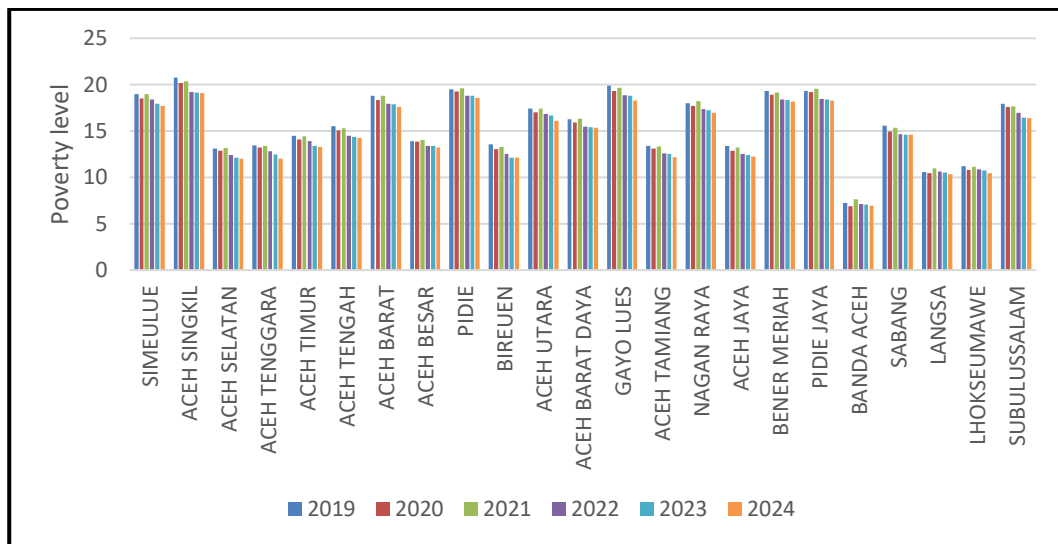


Figure 2. Poverty Rates in Regencies/Cities in Aceh Province 2019-2024 (percent)
 Source: Central Statistics Agency (2024)

Based on 2024 BPS data, which includes data from the past six years, Aceh has almost consistently been the poorest province on the island of Sumatra. Economic growth can mediate government spending on poverty. According to BPS data, the poverty rate in 2024 was 14.23%, down from 14.45% in 2023. Aceh Singkil Regency was the poorest district with a poverty rate of 19.06%, while Banda Aceh City had the lowest poverty rate in 2024 at 6.95%.

Poverty can be reduced through increased income. A region's income can be monitored through economic development. Economic development explains a region's economy, including factors that determine poverty levels in Indonesia, including economic growth (Ginting & Rasbin, 2010). To ensure that economic growth is more favorable to the poor, increasing their incomes due to the increasing number of jobs available to them, the government is expected to be persistent, particularly by providing investment funds for infrastructure development and productive sectors, thereby boosting economic growth (Silvia & Abrar, 2023).

Furthermore, the economic growth rate in regencies/cities in Aceh Province from 2019 to 2024, spread across regencies/cities, showed that West Aceh Regency and Banda Aceh City had high economic growth rates compared to other regencies/cities (BPS, 2024). West Aceh Regency's economic growth was driven by the agriculture, forestry, and fisheries sectors, with significant growth from 1.9 trillion Rupiah (2023) to 2.4 trillion Rupiah (2024). Banda Aceh City, meanwhile, contributed significantly to the financial services, transportation/logistics, and trade sectors.

Todaro & Smith (2015) emphasize that creating productive jobs is the most effective approach to poverty reduction because it not only increases household income but also strengthens individuals' long-term economic capacity. The

inability of various economic sectors to provide decent jobs is a major factor contributing to the slow decline in poverty rates in a number of regions. Therefore, a development strategy focused on job creation is crucial for sustainable poverty alleviation efforts (Purnomo & Istiqomah, 2019). Therefore, it is understandable that in order to create jobs and reduce unemployment, the government must establish an appropriate provincial minimum wage.

Furthermore, government spending is also crucial for poverty alleviation. Government spending allocated to social spending such as education subsidies, health services, social assistance, and economic empowerment programs acts as a social safety net for vulnerable groups facing various economic risks. Furthermore, government investment in civil infrastructure such as roads, electricity, and clean water contributes to expanding opportunities for low-income communities to engage in more productive economic activities by improving access to basic services and supporting facilities. Several studies have shown that increasing targeted government spending can significantly reduce poverty by increasing employment opportunities, increasing productivity, and improving the quality of government spending. According to Todaro & Smith (2014), the government plays a crucial role in poverty reduction through public policies designed to strengthen people's access to basic needs such as education, health care, and infrastructure.

In addition to the aforementioned poverty factors, life expectancy is a key indicator of human capital, indicating the expected lifespan of a population based on the health, social, and economic conditions in a region. Life expectancy not only reflects the quality of health services but also reflects the overall level of population well-being, which is directly proportional to economic growth due to the strong relationship between per capita income and life expectancy (Preston, 2012). According to 2024 Statistics Indonesia (BPS) data, life expectancy in districts/cities in Aceh Province increased from 2019 to 2024. Overall, life expectancy in Aceh Province increased from 69.87 years to 70.44 years, indicating improvements in quality of life and public health.

Poverty remains a complex and multifaceted issue. Many families remain vulnerable, where even minor economic changes can push them back below the poverty line. Inequality in access to education, decent work, basic facilities, and limited economic opportunities in various regions means that progress in health does not always align with improvements in financial well-being (Pratama et al., 2025).

Based on the explanation above, it is clear that poverty is a crucial aspect that needs to be addressed and improved so that every individual can live a decent and happy life. In accordance with the research background, this study examines the facts of poverty, examining several factors that can contribute to poverty alleviation, such as labor absorption, government spending, and life expectancy. Economic growth, as a mediating variable, influences labor absorption, government spending, and life expectancy on poverty in Aceh Province.

Research Methods

This research uses a quantitative approach. The scope of this study is designed to define boundaries to focus the research and avoid irrelevant discussions. The scope of this study is to analyze the influence of labor absorption, government expenditure, and life expectancy on economic growth. This is followed by an analysis of the influence of labor absorption, government expenditure, life expectancy, and economic growth on poverty. The mediating role of economic growth in the influence of labor absorption, government expenditure, and life expectancy on poverty is also examined. This research was conducted over a six-year period, from 2019 to 2024, in 23 districts/cities in Aceh Province, with a total of 138 observations.

The type of data used in this study is panel data, a combination of time series and cross-sectional data (Silvia, 2020), sourced from the Central Statistics Agency (BPS) and the Directorate General of Fiscal Balance for the last six years, from 2019 to 2024. The analysis uses panel data regression with two approaches: a fixed effects model and a random effects model. The differences in the approaches used are adjusted to the characteristics between observation units and the time that influences the research variables.

Results and Discussion

Results

The results of the test to determine the best model indicate that for Models I, II, and IV, the fixed effect model was selected, while for Model III, the random effect model was selected as the best panel data model that can be used for the data analysis process. Model I is to explain the influence of labor absorption, government expenditure, and life expectancy on poverty in Aceh Province. Meanwhile, Model II is used to explain the influence of labor absorption, government expenditure, and life expectancy on economic growth in Aceh Province. Model III explains the influence of economic growth on poverty, and Model IV explains the influence of labor absorption, government expenditure, life expectancy, and economic growth on poverty in Aceh Province. The results of the panel data test can be seen in Table 1, which illustrates the influence between the independent variables on the dependent variable.

Table 1 Results of Panel Data Model Testing

Model	Variable	Coefficient	Std. Error	t-Statistic	Prob.
Model 1 (KM)	C	124,8641	6,960606	17,93868	0,0000
	PTK	-0,011852	0,009612	-1,233052	0,2201
	PP	0,000866	0,000390	2,220486	0,0284
	AHH	-1,596154	0,100872	-15,82351	0,0000
Model 2 (PE)	C	-312,5308	47,20102	-6,621274	0,0000
	PTK	-0,153036	0,065181	-2,347857	0,0206
	PP	0,011383	0,002646	4,301859	0,0000
	AHH	4,682059	0,684031	6,844801	0,0000
Model 3 (KM)	C	15,34912	0,719937	21,32009	0,0000
	PE	-0,048522	0,023091	-2,101360	0,0375
Model 4 (KM)	C	137,8374	7,914.086	17,41672	0,0000
	PTK	-0,005500	0,009490	-0,579506	0,5634
	PP	0,000394	0,000406	0,970291	0,3340
	AHH	-1,790509	0,115792	-15,46311	0,0000
	PE	0.041511	0,013431	3,090658	0,0025

Source: Results of research data processing

Discussion

Based on the results of the data analysis, it was shown that labor absorption had no significant effect on reducing poverty levels in the study area. The negative coefficient indicates that increased labor absorption tends to reduce poverty, but this effect is not statistically strong. This condition can occur if the available jobs are predominantly in the informal sector, low-wage, or do not provide welfare guarantees.

This finding aligns with research (Ramadhani & Putra, 2019), which states that increased labor absorption does not always reduce poverty if the quality of available jobs remains low. Research (Hasbiah et al., 2025) also found that increasing employment in labor-intensive sectors did not significantly reduce poverty due to low wages. These results are confirmed by Novitasari & Susilo (2025), who stated that high labor absorption does not significantly reduce poverty if workers are exclusively in the informal sector. Nugraha et al., 2025 also found that labor participation had no effect on poverty in Indonesia.

Therefore, it can be concluded that labor absorption has not been effective in reducing poverty in the study area. Employment policies need to be directed not only at increasing the number of workers absorbed, but also at improving job quality, providing decent wages, and providing skills training. This is crucial to ensuring workers are not only employed but also have sufficient income to escape poverty.

The government expenditure variable has a significant impact on poverty levels. A positive coefficient indicates that increased government spending actually leads to increased poverty. This can occur if government spending allocations are not well-

targeted, are primarily used for sectors not directly related to the poor, or are unable to boost the productivity of the community sector.

This study's findings align with the findings of Akbar & Taufiq (2023), who stated that government spending has not been effective in reducing poverty. In fact, social government spending increases poverty because the poor are dependent on the government. Furthermore, Niuwa et al. (2019) stated that government spending has a significant positive impact on poverty in Gorontalo. This finding is reinforced by Kartika et al. (2021), who explain that the implementation of government spending is often hampered by effective distribution and bureaucratic issues, resulting in slow impacts for the poor. Similarly, Ramadhani & Ridwan (2024) also found that government spending on housing, public facilities, and social government spending has a significant positive impact on poverty.

Thus, referring to the research findings and development theory by Todaro & Smith (2015), new government spending will have a significant impact on poverty reduction if it is directed toward human development, such as improving workforce skills, healthcare, and access to education. Therefore, these findings reinforce the point that misdirected budget allocation can reduce the effectiveness of poverty reduction, necessitating a future focus on productive spending that directly impacts the community. Life expectancy has a negative and significant effect on poverty. This means that every one-point increase in life expectancy reduces the poverty rate by 1.59 percent. This indicates that improved public health leads to increased productivity, improved workforce competitiveness, and increased income, ultimately reducing poverty.

These results are in accordance with research by Putri & Hasmarini (2025) who also explained that high life expectancy is an indicator of increasing quality of health services which has an impact on reducing poverty. The above factors cause poor workers through three mechanisms: (1) low income, (2) low labor force participation, and (3) high household burdens (Crettaz, 2011; Crettaz and Bonoli, 2011). Macro and individual-level factors influence low income and low labor force participation, while job characteristics only affect the income received by individual workers. In addition, the results of the analysis also show that labor absorption has a negative but significant effect on economic growth, a negative coefficient indicates that when labor absorption increases, economic growth actually tends to decline, this can occur if the absorbed workforce is mostly in the informal sector, has low productivity, and lacks skills so that it is unable to drive economic output optimally.

Prameswari et al. (2021) emphasize that unskilled informal sector workers often do not contribute significantly to regional economic growth. Therefore, strengthening human resources through skills training, labor certification, and increased productivity is necessary to ensure the workforce plays a significant role in driving economic growth. Policy implications also need to be directed at developing the formal labor market and increasing productivity-based minimum wages.

The results of this study also indicate that increased government spending has a positive and significant impact on economic growth. This means that increased

government spending can boost economic growth. Each 1-unit increase in government spending can increase economic growth by 0.011383. This significant effect indicates that fiscal stimulus through government spending remains the primary driver for driving the economy through the provision of infrastructure, public services, community empowerment, education, health care, and support for the productive sector.

These results align with Sodik's (2007) research, which states that increased government spending has a significant positive impact on regional economic growth. This finding aligns with Keynes's theory regarding the government's role in stimulating growth through fiscal instruments. The greater the allocation of funds to the productive sector, the greater its contribution to increased economic activity.

Life expectancy has a positive and significant effect on economic growth. This indicates that an increase in life expectancy is correlated with increases in labor productivity, human resource quality, and economic output. Each one-unit increase in life expectancy increases economic growth by 4.682059 points, making it the most influential variable in this model.

Furthermore, improvements in health and life expectancy increase productivity and drive economic growth. These research findings are consistent with Amartya Sen's (1999) Human Capital theory, which positions health as an asset for economic development. This means that investment in the health sector directly contributes to economic growth by improving quality of life and work productivity.

The data analysis also demonstrates that economic growth has a significant impact on poverty reduction. This demonstrates that increased economic growth has the potential to reduce poverty, and its contribution is quite strong, meaning that the increase in Gross Regional Domestic Product (GRDP) is fully enjoyed by the poor.

This research finding is relevant to the findings of Ginting & Dewi (2013), who also showed that economic growth has a significant negative effect on poverty reduction when growth is inclusive, demonstrating the importance of equity in the growth-poverty relationship. This finding also aligns with the Kuznets Curve theory. According to Kuznets, economic growth will drive increased income through a trickle-down effect, thereby reducing poverty levels. This research finding aligns with this theory, where economic growth has been shown to have a significant negative effect on poverty.

Conclusion

Based on the results of the research data analysis, it was concluded that labor absorption and government spending had no effect on poverty, while life expectancy had a significant negative effect on poverty, meaning that life expectancy was able to reduce poverty, and economic growth had a significant positive effect on poverty, due to non-inclusive economic growth, namely economic growth enjoyed by certain groups while the poor did not get any benefit at all, labor absorption on poverty through economic growth as mediation had no

effect, and government spending on poverty through economic growth as mediation had a negative result, and life expectancy on poverty through economic growth as mediation had a negative effect.

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